

AD-A100 446

ARMY ELECTRONICS RESEARCH AND DEVELOPMENT COMMAND WS-ETC F/O 4/2
193040 MRS, MISSILE NUMBER 003, ROUND NUMBER V-136/MD-3, 23 AP-ETC(U)
APR 81 D C KELLER

UNCLASSIFIED

ERADCOM/ASL-DR-1174

NL

1 of 1
AD-A
104446

END
DATE
FILMED
7-81
DTIC

NOT FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED

DR 1174
23 April 1981
AD

LEVEL II

12

AD 1174-46

9 METEOROLOGICAL DATA REPORT
193040 MRS
Missile No. 803
Round No. V-136/MO-3
23 April 1981
Number

Number

by

10 Donald C. Keller
Programs Coordinator
Phone: (505) 679-9568
AV 349-9568
WS Meteorological Team

DTIC
ELECTE
S JUN 22 1981 D

11 Apr 81

16 IF6657020127

1232

1702

14 ERADCOM/ASL-DR-1174

ATMOSPHERIC SCIENCES LABORATORY
WHITE SANDS MISSILE RANGE, NEW MEXICO

ECOM

UNITED STATES ARMY ELECTRONICS COMMAND

40663

81 6 18 020

48

Nothing in this report shall be construed as an
expression of opinion on the part of the Department.

DISCLAIMER

The findings in this report are not to be
construed as an official Department of the
Army position, unless so designated by other
authoritative documents.

The citation of trade names and names of
manufacturers in this report is not to be con-
sidered an official Government endorsement or
approval of commercial products or services
referenced herein.

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER DR 1174	2. GOVT ACCESSION NO. AD-A100	3. RECIPIENT'S CATALOG NUMBER 446
4. TITLE (and Subtitle) 19304D MLRS Missile No. 003 Round No. V-136/MD-3		5. TYPE OF REPORT & PERIOD COVERED
7. AUTHOR(s) White Sands Meteorological Team		6. PERFORMING ORG. REPORT NUMBER
9. PERFORMING ORGANIZATION NAME AND ADDRESS		8. CONTRACT OR GRANT NUMBER(s) DA Task 1F665702D127-02
11. CONTROLLING OFFICE NAME AND ADDRESS US Army Electronics Research & Development Cmd Atmospheric Sciences Laboratory White Sands Missile Range, New Mexico 88002		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)		12. REPORT DATE April 1981
		13. NUMBER OF PAGES 30
		15. SECURITY CLASS. (of this report)
		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE
16. DISTRIBUTION STATEMENT (of this Report)		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report) Approved for public release; distribution unlimited.		
18. SUPPLEMENTARY NOTES		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number)		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Meteorological data gathered for the launching of the 19304D MLRS, Missile No. 003, Round No. V-136/MD-3 presented in tabular form.		

DD FORM 1 JAN 73 1473

EDITION OF 1 NOV 65 IS OBSOLETE

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

CONTENTS

INTRODUCTION-----	PAGE 1
DISCUSSION-----	1
MAP-----	2
TABLES	
1. Surface Observation taken at 1744 MST at LC-33-----	3
2. Anemometer-Measured Wind Speed and Direction, LC-33 Fixed Pole, taken at 1744 MST-----	4
3. Anemometer-Measured Wind Speed and Direction, Tower Levels 1, 2, 3, and 4, taken at 1744 MST-----	4
4. LC-33 and NICK Site T-Time Pilot-Balloon Measured Wind Data-----	5
5. Aiming and T-Time Computer Met Messages-----	6
6. WSD Significant Level Data at 1330 MST-----	7
7. WSD Upper Air Data at 1330 MST-----	8
8. WSD Mandatory Levels at 1330 MST-----	10
9. LC-37 Significant Level Data at 1430 MST-----	11
10. LC-37 Upper Air Data at 1430 MST-----	12
11. LC-37 Mandatory Levels at 1430 MST-----	14
12. WSD Significant Level Data at 1530 MST-----	15
13. WSD Upper Air Data at 1530 MST-----	16
14. WSD Mandatory Levels at 1530 MST-----	18
15. LC-37 Significant Level Data at 1630 MST-----	19
16. LC-37 Upper Air Data at 1630 MST-----	20
17. LC-37 Mandatory Levels at 1630 MST-----	22
18. WSD Significant Level Data at 1730 MST-----	23
19. WSD Upper Air Data at 1730 MST-----	24
20. WSD Mandatory Levels at 1730 MST-----	26

INTRODUCTION

19304D MLRS _____, Missile Number 003, Round Number V-136/MD-3,
was launched from LC-33, White Sands Missile Range (WSMR), New
Mexico, at 1744 on 23 April 1981. The scheduled launch time
was 1730 MST.

DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

1. Observations

a. Surface

(1) Standard surface observations to include pressure, temperature ($^{\circ}\text{C}$), relative humidity, dew point ($^{\circ}\text{C}$), density (gm/m^3), wind direction and speed, and cloud cover were made at the LC-33 met site at T-0 minutes.

(2) Monitor of wind speed and direction from one anemometer was provided in the launch control room.

b. Upper Air

(1) Low level wind data were obtained from RAPTS T-9 pibal observation at:

SITE AND ALTITUDE

LC-33	2KM
NICK	2KM

(b) Air structure data (rawinsonde) were collected at the following met sites.

SITE AND TIME

WSD	1330 MST
LC-37	1430 MST
WSD	1530 MST
LC-37	1630 MST
WSD	1730 MST

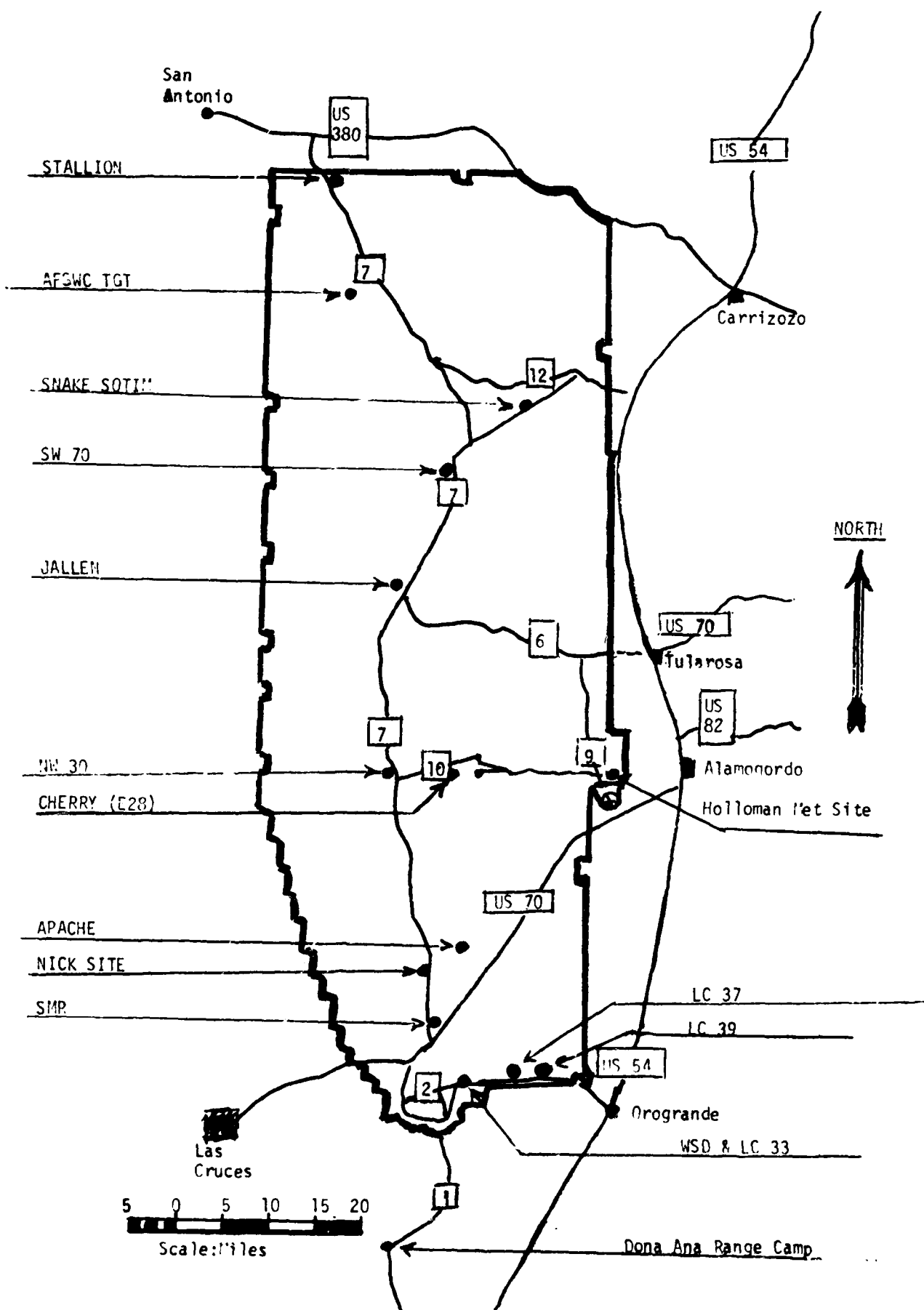


TABLE 1. Surface Observations taken at 1744 MST,
23 April 1981, at LC-33, 19304D MLRS,
Missile No. 003, Round No. V-136/MD-3.

ELEVATION	3983	FT/MSL
PRESSURE	880.9	MBARS
TEMPERATURE	17.3	°C
RELATIVE HUMIDITY	44	%
DEW POINT	4.9	°C
DENSITY	1052	GM/M ³
WIND SPEED	10	KTS
WIND DIRECTION	120	DEGREES
CLOUD COVER	10,000/1/AC 25,000/2/CS	1st Layer/AMT/TYPE 2nd Layer/AMT/TYPE

Accession For	
NTIS CLASS	<input checked="" type="checkbox"/>
NTIS TAG	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Source	
By	
Date	
Number of copies	
Name of agency or	
Post office address	

TABLE 2 LC-33 FIXED POLE ANEMOMETER MEASURED WINDS

POLE #1 X485,874.29 Y185,958.90 H4018.74 38.7 ft. AGL			POLE #2 X485,874.93 Y186,012.00 H4033.57 53.0 ft. AGL			POLE #3 X485,877.23 Y186,116.06 H4063.92 83.6 ft. AGL		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
T-30	136	11	T-30	136	12	T-30	156	15
T-20	138	12	T-20	144	11	T-20	148	15
T-10	133	13	T-10	135	12	T-10	147	11
T0.0	132	13	T0.0	129	10	T0.0	146	12
T+10	143	11	T+10	146	08	T+10	149	12

TABLE 3 LC-33 METEOROLOGICAL TOWER ANEMOMETER MEASURED WINDS (202 FT TOWER)

LEVEL #1, 12 FEET X484,982.64, Y185,057.73, H3983.00 (base)			LEVEL #2, 62 FEET X484,982.64, Y185,057.73, H3983.00 (base)		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
T-30	150	14	T-30	149	18
T-20	149	14	T-20	141	17
T-10	144	10	T-10	144	17
T0.0	121	10	T0.0	146	16
T+10	129	13	T+10	147	18

LEVEL #3, 102 FEET X484,982.64, Y185,057.73, H3983.00 (base)			LEVEL #4, 202 FEET X484,982.64, Y185,057.73, H3983.00 (base)		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
T-30	MISG	MISG	T-30	140	16
T-20	"	"	T-20	141	16
T-10	"	"	T-10	135	16
T0.0	"	"	T0.0	149	14
T+10	MISG	MISG	T+10	148	14

TABLE 4

T-TIME PILOT-BALLOON MEASURED WIND DATA

DATE 23 April 1981

SITE: LC-33

TIME: 1750 MST

WSTM COORDINATES:

X= 486,037.24

Y= 182,350.16

H= 3977.30

SITE: NICK

TIME: 1744 MST

WSTM COORDINATES:

X= 470,734.56

Y= 255,775.64

H= 4126.57

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE	120	12
150	130	09
210	142	12
270	140	15
330	143	15
390	153	17
450	155	18
510	157	18
570	151	21
630	141	20
690	140	18
750	129	13
810	108	07
870	076	04
930	010	16

Data obtained from A
RAAF T-9 Radar Observation

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE	182	14
150	189	23
210	189	24
270	188	24
330	187	24
390	185	24
450	181	25
510	176	24
570	167	17
630	119	05
690	017	08
750	008	16
810	005	20
870	008	21
930	023	22

Data obtained from A Single Theodolite
Observation

TABLE 5

AIMING AND T-TIME COMPUTER MET MESSAGES
23 April 1981

WSD 1330 MST
METCM1325065

232050122881

00213016 29400881

01225021 29250871

02212018 28910846

03177014 28510806

04098013 28060759

05069016 27670714

06092018 27260671

07125021 26800630

08126024 26410591

LC-37 1430 MST
METCM1325064

232150124879

00311011 29510879

01184019 29330869

02195017 28940844

03180012 28530804

04158012 28050757

05096012 27610712

06074018 27230669

07112022 26820629

08133031 26570590

WSD 1530 MST
METCM1325065

232250122880

00258013 29550880

01252017 29310870

02214016 28960845

03162010 28580806

04166012 28090758

05100008 27600713

06063015 27190670

07074026 26840629

08134032 26620591

LC-37 1630 MST
METCM1325064

232350124879

00373010 29290879

01242017 29100868

02241021 28800843

03217014 28450804

04162009 28030757

05038009 27560712

06024019 27220669

07068024 26860628

08128031 26610589

WSD 1730 MST
METCM1325065

240050122881

00249013 29130881

*01237014 29060870

*02232012 28860845

03242015 28460806

04243015 27980758

05083010 27640713

06050020 27370670

07056025 26910630

08106029 26600591

* Wind direction and speed estimated due to GMD not tracking.

STATION ALTITUDE 3989.00 FEET MSL
23 APR. 81 1330 HRS MST
ASCENSION NO. 292

SIGNIFICANT LEVEL DATA

1130020292
WHITE SANDS

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

TABLE 6

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE		REL. HUM. PERCENT
		AIR DEGREES	DEWPOINT CENTIGRADE	
980.9	3989.0	20.0	1.4	29.0
850.0	4990.4	15.2	-0.5	34.0
765.6	7860.0	7.4	-0.8	56.0
700.0	10259.1	1.4	-3.5	70.0
650.6	12182.1	-2.9	-8.5	65.0
623.2	13296.8	-6.1	-10.3	72.0
592.6	14585.1	-9.4	-16.7	55.0
578.4	15200.4	-10.4	-21.9	38.0
560.8	15982.4	-10.5	-29.6	19.0
518.2	17964.6	-14.9	-32.8	20.0
509.8	18370.9	-15.3	-33.1	20.0
500.0	18854.0	-14.3	-32.3	20.0
477.2	20014.8	-15.8	-30.8	26.0
453.2	21287.2	-18.8	-27.3	47.0
434.2	22332.3	-21.2	-30.7	42.0
400.0	24303.7	-26.5	-42.6	20.0
336.8	28316.5	-35.7	-48.9	24.0

STATION ALTITUDE 3989.00 FEET MSL
23 APR. 81
ASCENSION NO. 292

UPPER AIR DATA
1130020292
WHITE SANDS

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

TABLE 7

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
3989.0	980.9	22.0	29.0	1043.8	668.0	120.0	15.9	1.000262
4000.0	880.6	19.9	29.1	1043.6	667.9	119.9	15.9	1.000262
4600.0	865.0	17.6	31.6	1033.7	665.1	117.0	16.1	1.000259
5000.0	849.7	15.2	34.1	1024.0	662.4	114.1	16.3	1.000255
5500.0	834.4	13.8	37.9	1010.1	660.8	111.3	16.5	1.000253
6000.0	819.3	12.5	41.7	996.5	659.3	108.5	16.7	1.000250
6500.0	804.5	11.1	45.6	983.2	657.7	102.3	15.7	1.000247
7000.0	790.0	9.7	49.4	970.0	656.2	89.5	13.5	1.000244
7500.0	775.7	8.4	53.2	957.1	654.6	73.8	12.3	1.000241
8000.0	761.6	7.0	56.8	944.2	653.0	57.3	12.1	1.000238
8500.0	747.5	5.8	59.7	930.9	651.6	45.3	13.0	1.000234
9000.0	733.7	4.5	62.7	917.9	650.1	41.4	14.3	1.000231
9500.0	720.1	3.3	65.6	905.0	648.6	38.2	15.7	1.000227
10000.0	706.8	2.0	68.5	892.4	647.1	43.9	16.5	1.000223
10500.0	693.6	.9	69.4	879.7	645.7	49.4	17.3	1.000219
11000.0	680.5	-.3	68.1	866.8	644.3	53.6	18.2	1.000214
11500.0	667.7	-1.4	66.8	854.1	642.9	50.1	18.8	1.000209
12000.0	655.1	-2.5	65.5	841.6	641.5	58.5	19.4	1.000205
12500.0	642.7	-3.8	67.0	829.7	639.9	60.8	19.9	1.000201
13000.0	630.4	-5.2	70.1	818.3	638.2	63.3	20.5	1.000198
13500.0	618.3	-6.6	69.3	806.8	636.5	65.5	21.1	1.000194
14000.0	606.3	-7.9	62.7	795.2	634.9	68.7	22.5	1.000189
14500.0	594.6	-9.2	56.1	783.8	633.3	71.7	24.1	1.000184
15000.0	583.0	-10.1	43.5	771.4	632.1	73.4	26.7	1.000179
15500.0	571.6	-10.4	30.7	757.5	631.6	73.4	31.0	1.000173
16000.0	560.4	-10.5	19.0	743.1	631.4	73.4	35.3	1.000168
16500.0	549.3	-11.6	19.3	731.6	630.1	73.1	38.3	1.000166
17000.0	538.5	-12.8	19.5	720.2	628.7	72.8	41.2	1.000163
17500.0	527.9	-13.9	19.8	709.0	627.4	71.8	42.2	1.000160
18000.0	517.5	-14.9	20.0	697.9	626.1	70.8	43.2	1.000158
18500.0	507.2	-15.0	20.0	684.3	626.0	68.9	43.3	1.000155
19000.0	497.1	-14.5	20.8	669.3	626.7	66.9	42.9	1.000151
19500.0	487.2	-15.1	23.3	657.6	625.9	64.6	40.4	1.000149
20000.0	477.5	-15.8	25.9	646.1	625.1	62.0	37.9	1.000147
20500.0	467.9	-16.9	34.0	635.9	623.7	63.8	36.4	1.000145
21000.0	458.5	-18.1	42.3	626.0	622.3	65.9	35.0	1.000143
21500.0	449.3	-19.3	46.0	616.2	620.9	68.0	34.6	1.000141
22000.0	440.2	-20.4	43.6	606.5	619.4	69.8	35.8	1.000138
22500.0	431.2	-21.7	40.1	597.0	617.9	71.6	35.0	1.000136
23000.0	422.3	-23.0	34.5	587.9	616.3	70.9	38.8	1.000133

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

UPPER AIR DATA
1130020292
WHITE SANDS
TABLE 7 CON'T

STATION ALTITUDE 3989.00 FEET MSL
23 APR. 81 1330 HRS MST
ASCENSION NO. 292

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND		WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE			KNOTS	KNOTS	DIRECTION DEGREES(TN)	SPEED KNOTS	
23500.0	413.6	-24.3	-37.2	29.0	579.0	614.6		67.9	41.6	1.000130
24000.0	405.1	-25.7	-40.5	23.4	570.2	612.9		65.2	44.4	1.000128
24500.0	396.6	-26.9	-42.9	20.2	561.2	611.3		62.7	46.7	1.000126
25000.0	388.2	-28.1	-43.7	20.7	551.9	609.9		59.9	47.5	1.000124
25500.0	380.0	-29.2	-44.4	21.2	542.7	608.5		57.2	48.5	1.000122
26000.0	372.0	-30.4	-45.2	21.7	533.7	607.0		54.6	49.5	1.000120
26500.0	364.1	-31.5	-46.0	22.2	524.9	605.6				1.000118
27000.0	356.3	-32.7	-46.8	22.7	516.2	604.1				1.000116
27500.0	348.8	-33.8	-47.6	23.2	507.7	602.7				1.000114
28000.0	341.4	-35.0	-48.4	23.7	499.3	601.3				1.000112

STATION ALTITUDE 3989.00 FEET MSL
23 APR. 81
ASCENSION NO. 292

MANDATORY LEVELS
1130020292
WHITE SANDS
TABLE 8

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM. PERCENT	WIND DATA	
MILLIBARS	FEET	AIR DEGREES	DEWPOINT CENTIGRADE		DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	4987.	15.2	-5	34.	114.2	16.3
800.0	6658.	10.7	-2	47.	98.7	14.9
750.0	8408.	6.0	-1.3	59.	46.0	12.8
700.0	10249.	1.4	-3.5	70.	46.7	16.9
650.0	12193.	-3.0	-8.6	65.	59.3	19.6
600.0	14252.	-8.6	-15.1	59.	70.3	23.3
550.0	16452.	-11.6	-30.4	19.	73.1	38.1
500.0	18828.	-14.3	-32.3	20.	67.6	43.4
450.0	21428.	-19.2	-27.8	46.	67.8	34.5
400.0	24263.	-26.5	-42.6	20.	63.8	46.1
350.0	27383.	-33.6	-47.5	23.		

STATION ALTITUDE 4051.37 FEET NSL
23 APR. 51 1430 HRS MST
ASCENSION NO. 37

SIGNIFICANT LEVEL DATA

1130180037

LC-37

TABLE 9

GEODETIC COORDINATES
32.40175 LAT DEG
106.31232 LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE		REL. HUM. PERCENT
		AIR DEGREES	DEWPOINT CENTIGRADE	
878.8	4051.4	21.0	5.0	35.0
869.0	4368.7	19.0	2.8	34.0
850.0	4988.8	16.1	1.4	37.0
807.8	6399.6	11.9	.4	45.0
737.6	8867.7	4.5	-1.7	64.0
700.0	10261.5	1.3	-2.5	76.0
678.2	11096.5	-.6	-4.3	76.0
669.0	11455.2	-1.2	-6.5	67.0
650.0	12208.7	-2.7	-10.9	53.0
618.2	13507.4	-6.5	-12.0	65.0
604.0	14103.5	-7.5	-20.3	35.0
591.3	14647.7	-7.3	-18.5	40.0
576.8	15283.4	-7.5	-26.0	21.0
516.6	18067.2	-14.5	-31.4	22.0
500.0	18879.4	-15.6	-32.4	22.0
467.2	20555.4	-18.0	-33.6	24.0
443.4	21831.2	-21.9	-33.5	34.0
428.0	22687.0	-22.0	-32.4	38.0
400.0	24311.9	-26.0	-37.1	34.0
354.8	27123.1	-33.9	-46.0	28.0
340.6	28063.1	-35.0	-47.0	28.0
320.2	29470.6	-38.6	-49.3	31.0
300.0	30932.2	-42.5		
275.8	32782.8	-47.5		
245.1	35311.6	-54.5		

STATION ALTITUDE 4051.37 FEET MSL
23 APR. 81 1430 HRS MST
ASCENSION NO. 37

UPPER AIR DATA
1130180037
LC-37

TABLE 10

GEODETIC COORDINATES
32.40175 LAT DEG
106.31232 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM ³	SPEED OF SOUND KNOTS	DIRECTION DEGREES(TN)	*INDU DATA SPEED KNOTS	INDEX OF REFRACTION
4051.4	878.8	21.0	5.0	35.0	1036.9	669.4	175.0	11.1	1.000269
4500.0	864.9	18.4	2.5	34.6	1030.2	666.2	163.4	10.1	1.000262
5000.0	849.7	16.1	1.4	37.1	1020.3	663.5	148.6	9.7	1.000258
5500.0	834.5	14.6	1.1	39.9	1007.3	661.8	133.4	9.9	1.000255
6000.0	819.5	13.1	.7	42.7	994.4	660.1	119.6	10.7	1.000251
6500.0	804.8	11.6	.3	45.8	981.7	658.4	108.5	12.1	1.000248
7000.0	790.1	10.1	.1	49.6	968.9	656.6	100.0	13.7	1.000245
7500.0	775.7	8.6	-.3	53.5	956.3	654.9	95.4	12.7	1.000242
8000.0	761.6	7.1	-.7	57.3	943.9	653.1	89.9	11.7	1.000238
8500.0	747.7	5.6	-1.3	61.2	931.7	651.4	83.7	10.9	1.000235
9000.0	733.9	4.2	-1.8	65.1	919.3	649.7	71.8	10.7	1.000231
9500.0	720.3	3.0	-2.0	69.4	906.0	648.3	58.4	11.4	1.000228
10000.0	706.9	1.9	-2.3	73.7	892.9	647.0	48.1	12.6	1.000225
10500.0	693.7	.8	-3.0	76.0	879.9	645.6	46.6	14.4	1.000221
11000.0	680.7	-.4	-4.1	76.0	867.1	644.2	45.3	16.1	1.000216
11500.0	667.9	-1.3	-6.8	66.2	854.0	643.0	45.7	17.7	1.000209
12000.0	655.2	-2.3	-9.7	56.9	841.2	641.7	50.9	19.0	1.000203
12500.0	642.7	-3.6	-11.1	55.7	829.2	640.2	55.3	20.5	1.000198
13000.0	630.4	-5.0	-11.5	60.3	817.8	638.4	59.8	22.1	1.000196
13500.0	618.4	-6.5	-12.0	64.9	806.6	636.7	65.3	24.1	1.000193
14000.0	606.4	-7.3	-18.5	40.2	794.1	635.5	70.0	26.3	1.000184
14500.0	594.7	-7.4	-19.0	38.6	778.8	635.4	72.8	29.0	1.000181
15000.0	583.2	-7.4	-22.2	29.5	764.1	635.3	74.1	32.3	1.000176
15500.0	571.9	-8.0	-26.4	21.1	751.1	634.5	75.2	35.5	1.000171
16000.0	560.7	-9.3	-27.4	21.3	739.9	632.9	74.3	36.8	1.000168
16500.0	549.7	-10.6	-28.4	21.4	728.9	631.4	73.2	38.0	1.000166
17000.0	538.9	-11.8	-29.3	21.6	718.1	629.9	72.4	39.1	1.000163
17500.0	528.3	-13.1	-30.3	21.8	707.4	628.4	72.4	39.2	1.000160
18000.0	518.0	-14.3	-31.3	22.0	697.0	626.8	72.5	39.4	1.000158
18500.0	507.7	-15.1	-31.9	22.0	685.1	625.9	71.8	40.9	1.000155
19000.0	497.6	-15.8	-32.5	22.1	673.3	625.1	70.7	43.7	1.000152
19500.0	487.6	-16.5	-32.8	22.7	661.6	624.2	69.5	46.1	1.000150
20000.0	477.8	-17.2	-33.2	23.3	650.2	623.3	67.7	46.7	1.000147
20500.0	468.2	-17.9	-33.5	23.9	638.9	622.5	66.0	47.4	1.000144
21000.0	458.8	-19.4	-33.4	27.5	629.5	620.7	64.8	45.3	1.000142
21500.0	449.5	-20.9	-33.4	31.4	620.5	618.9	63.6	42.0	1.000140
22000.0	440.3	-21.9	-33.2	34.8	610.4	617.6	62.3	38.9	1.000138
22500.0	431.3	-22.0	-32.6	37.1	598.0	617.5	61.3	38.3	1.000136
23000.0	422.5	-22.8	-33.3	37.2	587.6	616.5	60.2	37.7	1.000133
23500.0	413.8	-24.0	-34.8	36.0	578.4	615.0	59.4	38.1	1.000131

STATION ALTITUDE 4051.37 FEET MSL
 23 APR. 61
 ASCENSION NO. 37

UPPER AIR DATA
 1130180037
 LC-37

GEODETIC COORDINATES
 32.40175 LAT DEG
 106.31232 LON DEG

TABLE 10 CONT

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
24000.0	405.2	-25.2	34.8	569.3	613.5	59.1	40.2	1.000128
24500.0	396.8	-26.5	33.6	560.4	611.9	58.9	42.3	1.000126
25000.0	388.4	-27.9	32.5	551.7	610.1	58.1	43.7	1.000124
25500.0	380.2	-29.3	31.5	543.2	608.4	56.5	44.2	1.000122
26000.0	372.2	-30.7	30.4	534.8	606.6	54.9	44.7	1.000120
26500.0	364.4	-32.1	29.3	526.6	604.8	53.1	44.9	1.000118
27000.0	356.7	-33.6	28.3	518.5	603.1	50.2	44.1	1.000116
27500.0	349.0	-34.3	28.0	509.1	602.1	47.2	43.5	1.000114
28000.0	341.5	-34.9	28.0	499.4	601.3	44.4	42.7	1.000112
28500.0	334.1	-36.1	28.9	491.0	599.8	42.6	41.0	1.000110
29000.0	326.9	-37.4	30.0	483.0	598.2	41.0	39.3	1.000108
29500.0	319.8	-38.7	30.4**	475.1	596.6	40.8	37.1	1.000106
30000.0	312.7	-40.0	19.8**	467.3	594.9	42.7	34.2	1.000104
30500.0	305.8	-41.3	9.2**	459.6	593.1	45.0	31.5	1.000102
31000.0	299.1	-42.7		452.1	591.4	49.0	30.8	1.000101
31500.0	292.4	-44.0		444.5	589.7	53.1	30.3	1.000099
32000.0	285.8	-45.4		437.1	587.9	56.3	30.5	1.000097
32500.0	279.4	-46.7		429.8	586.2	57.8	31.4	1.000096
33000.0	273.0	-48.1		422.6	584.4	59.3	32.4	1.000094
33500.0	266.7	-49.5		415.4	582.6			1.000093
34000.0	260.6	-50.9		408.4	580.8			1.000091
34500.0	254.6	-52.3		401.5	579.0			1.000089
35000.0	248.7	-53.6		394.7	577.2			1.000088

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4051.37 FEET MSL
23 APR. 81 1430 HRS MST
ASCENSION NO. 37

MANDATORY LEVELS
1130180037
LC-37

GEODEIC COORDINATES
32.40175 LAT DEG
106.31232 LON DEG

TABLE 11

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM. PERCENT	WIND DATA	
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE		DIRECTION DEGREES (TN)	SPEED KNOTS
850.0	4985.	16.1	1.4	37.	149.0	9.7
800.0	6661.	11.1	.2	47.	105.4	12.6
750.0	8412.	5.9	-1.2	61.	84.8	11.0
700.0	10251.	1.3	-2.5	76.	47.3	13.5
650.0	12196.	-2.7	-10.9	53.	52.7	19.6
600.0	14257.	-7.4	-19.7	37.	72.1	27.5
550.0	16473.	-10.5	-28.3	21.	73.3	38.0
500.0	18853.	-15.6	-32.4	22.	71.0	43.0
450.0	21440.	-20.8	-33.4	31.	63.7	42.3
400.0	24272.	-26.0	-37.1	34.	59.0	41.5
350.0	27387.	-34.3	-46.3	28.	47.7	43.6
300.0	30871.	-42.5			48.3	30.9
250.0	34817.	-53.3				

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3989.0 M
 23 APR. 82 1530 HRS
 ASCENSION NO. 290

SIGNIFICANT LEVEL DATA
 1130020293
 WHITE SANDS

TABLE 12

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE		REL. HUM. PERCENT
		AIR DEGREES	DEWPOINT CENTIGRADE	
880.0	3989.0	21.5	4.6	33.0
860.6	4618.2	16.9	4.6	44.0
850.0	4964.7	16.0	4.1	45.0
752.6	8304.6	6.3	-2	63.0
700.0	10238.2	.4	-1.7	86.0
668.4	11451.8	-2.3	-3.1	94.0
623.4	13261.3	-5.9	-8.2	84.0
597.0	14374.0	-7.0	-17.4	43.0
579.8	15123.2	-7.4	-19.9	36.0
537.2	17061.0	-11.9	-23.3	38.0
500.0	18857.7	-14.8	-26.5	36.0
435.0	22272.1	-22.7	-33.3	37.0
420.4	23094.0	-24.1	-32.2	47.0
413.0	23520.1	-24.3	-33.5	42.0
400.0	24284.3	-26.3	-36.3	38.0
356.8	26962.6	-33.8	-43.6	36.0

STATION ALTITUDE 3989.00 FEET MSL
23 APR. 81 1530 HRS MST
ASCENSION NO. 293

UPPER AIR DATA
1130020293
WHITE SANDS

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

TABLE 13

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
3989.0	880.0	21.5	33.0	1036.6	669.9	145.0	13.0	1.000268
4000.0	879.7	21.4	33.2	1036.5	669.9	144.8	13.0	1.000268
4500.0	864.2	17.8	41.9	1031.0	665.7	137.5	12.1	1.000268
5000.0	848.9	15.9	45.2	1019.4	663.5	129.1	11.4	1.000264
5500.0	833.6	14.4	47.9	1006.1	661.9	119.9	11.1	1.000260
6000.0	818.5	13.0	50.6	993.0	660.2	110.3	11.0	1.000256
6500.0	803.8	11.5	53.3	980.2	658.5	101.3	11.1	1.000252
7000.0	789.2	10.1	56.0	967.5	656.7	97.3	10.3	1.000248
7500.0	775.0	8.6	58.7	955.0	655.0	92.6	9.6	1.000244
8000.0	761.0	7.2	61.4	942.8	653.3	86.9	9.9	1.000240
8500.0	747.1	5.7	65.3	930.5	651.5	81.7	10.5	1.000237
9000.0	733.2	4.2	71.3	918.3	649.8	73.5	9.4	1.000234
9500.0	719.6	2.7	77.2	906.2	648.0	63.1	8.7	1.000230
10000.0	706.3	1.1	83.2	894.4	646.1	52.1	9.3	1.000227
10500.0	693.1	-0.2	87.7	881.9	644.6	42.6	10.1	1.000223
11000.0	680.0	-1.3	91.0	868.9	643.2	37.7	13.1	1.000220
11500.0	667.2	-2.4	93.7	856.1	641.9	34.6	16.1	1.000216
12000.0	654.4	-3.4	91.0	843.0	640.7	36.5	19.1	1.000210
12500.0	642.0	-4.4	88.2	830.2	639.4	40.0	22.3	1.000205
13000.0	629.7	-5.4	85.4	817.5	638.2	44.3	25.0	1.000201
13500.0	617.6	-6.1	75.2	804.4	637.2	54.3	26.7	1.000195
14000.0	605.7	-6.6	56.8	790.7	636.4	62.9	29.1	1.000187
14500.0	594.1	-7.1	41.8	777.0	635.8	71.2	31.4	1.000181
15000.0	582.6	-7.3	37.2	762.9	635.4	78.3	34.3	1.000177
15500.0	571.3	-8.3	36.4	750.7	634.3	79.8	35.4	1.000174
16000.0	560.1	-9.4	36.9	739.4	632.9	81.1	36.3	1.000171
16500.0	549.2	-10.6	37.4	728.2	631.5	80.8	36.8	1.000168
17000.0	538.5	-11.8	37.9	717.2	630.1	79.4	36.9	1.000165
17500.0	527.9	-12.6	37.5	705.4	629.0	77.8	37.3	1.000162
18000.0	517.4	-13.4	37.0	693.6	628.0	74.9	39.8	1.000159
18500.0	507.2	-14.2	36.4	682.0	627.1	72.3	42.4	1.000156
19000.0	497.1	-15.1	36.0	670.8	625.9	70.3	44.7	1.000153
19500.0	487.1	-16.3	36.2	660.3	624.5	68.8	46.5	1.000151
20000.0	477.2	-17.4	36.3	649.9	623.1	67.4	48.4	1.000148
20500.0	467.6	-18.6	36.5	639.7	621.7	65.5	48.1	1.000145
21000.0	458.2	-19.8	36.6	629.6	620.3	62.9	45.7	1.000143
21500.0	448.9	-20.9	36.8	619.8	618.8	60.0	43.5	1.000141
22000.0	439.9	-22.1	36.9	610.1	617.4	57.9	41.5	1.000138
22500.0	430.9	-23.1	39.8	600.1	616.2	56.8	39.7	1.000136
23000.0	422.0	-23.9	45.9	589.8	615.1	55.6	37.9	1.000134

STATION ALTITUDE 3989.00 FEET
 23 APR. 81 1530 HRS
 ASCENSION NO. 233

UPPER AIR DATA
 1100020293
 WIND 10 KNOTS

GEODETIC COORDINATES
 32.40043 LAT DEG
 106.37033 LON DEG

TABLE 13 CONT'D

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
23500.0	413.3	-24.3	42.2	578.4	614.7	56.2	37.8	1.000131
24000.0	404.8	-25.6	39.5	569.4	613.1	58.4	39.2	1.000129
24500.0	396.3	-26.9	37.8	560.6	611.4	60.5	40.6	1.000126
25000.0	388.0	-28.3	37.5	551.9	609.7			1.000124
25500.0	379.8	-29.7	37.1	543.4	607.9			1.000122
26000.0	371.8	-31.1	36.7	535.0	606.1			1.000120
26500.0	363.9	-32.5	36.3	526.7	604.4			1.000118

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

MANDATORY LEVELS
1130020293
WHITE SANDS

STATION ALTITUDE 3989.00 FEET MSL
23 APR. 81 1530 HRS MST
ASCENSION NO. 293

TABLE 14

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM. PERCENT	WIND DATA	
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	DEWPOINT DEGREES CENTIGRADE		DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	4961.	16.0	4.1	45.	129.8	11.5
800.0	6637.	11.2	2.2	54.	100.2	10.9
750.0	8390.	6.0	-2	64.	82.8	10.4
700.0	10228.	.4	-1.7	86.	47.5	9.6
650.0	12166.	-3.7	-5.1	90.	37.8	20.2
600.0	14229.	-6.9	-16.1	48.	67.0	30.1
550.0	16445.	-10.5	-22.2	37.	80.9	36.8
500.0	18831.	-14.8	-26.5	36.	70.8	44.1
450.0	21418.	-20.8	-31.7	37.	60.4	43.7
400.0	24244.	-26.3	-36.3	38.	59.6	39.9

STATION ALTITUDE 4051.37 FEET MSL
23 APR. 81 1630 HRS MST
ASCENSION NO. 38

SIGNIFICANT LEVEL DATA
1130180036
LC-37

TABLE 15

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE		REL. HUM. PERCENT
	AIR DEGREES	DEWPOINT CENTIGRADE	
078.6	19.1	4.1	37.0
070.8	17.2	5.2	45.0
050.0	14.5	3.9	49.0
000.2	10.3	2.2	57.0
740.4	4.9	-5	68.0
712.0	1.9	-1.3	79.0
700.0	.1	-2.1	85.0
674.0	-1.4	-2.4	93.0
656.0	-2.1	-5.9	75.0
637.8	-4.2	-7.4	78.0
624.7	-5.6	-9.3	75.0
610.8	-6.0	-11.7	64.0
593.0	-7.2	-21.0	32.0
584.4	-6.8	-23.0	26.0
576.0	-7.5	-23.6	26.0
567.4	-8.7	-24.7	26.0
532.8	-12.8	-28.2	26.0
500.0	-14.8	-29.6	27.0
436.6	-21.3	-32.9	34.0
400.0	-26.4	-38.1	32.0
363.8	-32.1	-43.5	31.0
317.0	-40.0	-50.5	31.0
300.0	-42.8		
261.2	-50.5		
250.0	-52.5		

GEODETIC COORDINATES
32.40175 LAT DEG
106.31232 LON DEG

STATION ALTITUDE 4051.37 FEET MSL
 23 APR. 81
 ASCENSION NO. 38

UPPER AIR DATA
 1130180036
 LC-37

GEODETIC COORDINATES
 32.40175 LAT DEG
 106.31232 LON DEG

TABLE 16

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
4051.4	878.6	19.1	37.0	1043.6	667.2	210.0	9.9	1.000269
4500.0	864.5	16.4	46.2	1036.3	664.2	181.1	9.0	1.000270
5000.0	849.3	14.4	49.1	1025.1	661.9	151.5	10.8	1.000265
5500.0	834.0	13.2	51.5	1011.1	660.4	133.6	14.5	1.000261
6000.0	819.0	11.9	53.9	997.4	658.9	125.4	15.8	1.000257
6500.0	804.3	10.7	56.3	983.9	657.4	119.8	14.3	1.000253
7000.0	789.7	9.4	58.9	970.4	655.9	114.2	12.8	1.000249
7500.0	775.2	8.1	61.5	957.1	654.4	109.1	11.2	1.000245
8000.0	761.1	6.8	64.1	944.0	652.9	102.4	9.6	1.000241
8500.0	747.1	5.5	66.7	931.1	651.3	81.4	6.8	1.000237
9000.0	733.4	4.2	70.7	918.5	649.7	43.1	5.8	1.000233
9500.0	719.8	2.7	75.9	906.2	648.0	13.7	7.6	1.000230
10000.0	706.4	1.1	81.8	894.8	646.0	359.4	10.5	1.000227
10500.0	693.1	-3	87.1	882.4	644.4	1.2	13.3	1.000223
11000.0	680.1	-1.0	91.1	868.1	643.6	8.5	16.1	1.000220
11500.0	667.2	-1.7	86.3	853.9	642.8	16.4	18.6	1.000214
12000.0	654.6	-2.3	75.2	839.9	641.9	25.4	20.9	1.000207
12500.0	642.1	-3.7	77.3	828.4	640.2	32.7	23.3	1.000203
13000.0	629.9	-5.0	76.2	816.9	638.5	40.4	23.6	1.000199
13500.0	617.8	-5.8	69.6	803.7	637.5	47.9	24.3	1.000194
14000.0	605.9	-6.3	55.3	790.1	636.8	58.4	26.0	1.000187
14500.0	594.2	-7.1	34.3	777.5	635.7	68.5	28.8	1.000180
15000.0	582.8	-6.9	26.0	762.1	635.8	72.1	31.2	1.000175
15500.0	571.5	-8.1	26.0	750.8	634.4	74.0	33.4	1.000172
16000.0	560.3	-9.5	26.0	740.1	632.7	71.0	34.9	1.000169
16500.0	549.4	-10.8	26.0	729.2	631.2	67.1	36.5	1.000166
17000.0	538.6	-12.1	26.0	718.4	629.6	65.2	37.9	1.000164
17500.0	526.0	-13.1	26.1	707.0	628.4	63.7	39.3	1.000161
18000.0	517.5	-13.7	26.5	694.7	627.6	63.4	40.6	1.000158
18500.0	507.3	-14.3	26.8	682.6	626.9	63.5	41.8	1.000155
19000.0	497.2	-15.1	27.3	670.9	626.0	63.2	43.9	1.000152
19500.0	487.2	-16.0	28.3	659.9	624.8	62.8	40.6	1.000150
20000.0	477.4	-17.0	29.4	649.1	623.6	62.2	47.6	1.000147
20500.0	467.8	-18.0	30.4	638.4	622.4	61.3	45.9	1.000145
21000.0	458.4	-19.0	31.5	628.0	621.2	60.3	44.1	1.000142
21500.0	449.1	-19.9	32.5	617.7	620.0	59.2	41.3	1.000140
22000.0	440.1	-20.9	33.6	607.6	618.8	57.9	38.6	1.000138
22500.0	431.1	-22.0	33.7	597.9	617.4	57.4	37.6	1.000135
23000.0	422.2	-23.3	33.2	588.4	615.9	57.6	38.0	1.000133
23500.0	413.5	-24.5	32.8	579.1	614.4	57.8	38.3	1.000131

STATION ALTITUDE 4051.37 FEET MSL
23 APR. 51
ASCENSION NO. 38

UPPER AIR DATA
1350100038
1540Z

GEODETIC COORDINATES
32.40175 LAT DEG
106.31232 LONG DEG

TABLE 16 CONT

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
							DIRECTION DEGREES (TN)	SPEED KNOTS	
24000.0	405.0	-25.7	-37.3	32.3	570.0	612.4	58.2	40.0	1.000128
24500.0	396.6	-26.4	-38.6	31.9	561.0	611.4	58.7	42.0	1.000126
25000.0	388.3	-28.2	-39.8	31.7	552.0	609.8	53.9	44.0	1.000124
25500.0	380.1	-29.5	-41.0	31.5	543.3	608.2	57.6	46.0	1.000122
26000.0	372.1	-30.7	-42.2	31.2	534.7	606.6	56.4	48.1	1.000120
26500.0	364.3	-32.0	-43.4	31.0	526.2	605.0	55.5	49.9	1.000118
27000.0	356.4	-33.3	-44.5	31.0	517.5	603.4	54.9	51.4	1.000116
27500.0	348.7	-34.5	-45.6	31.0	509.0	601.8	54.4	52.8	1.000114
28000.0	341.1	-35.8	-46.8	31.0	500.6	600.2	53.4	51.9	1.000112
28500.0	333.8	-37.0	-47.9	31.0	492.4	598.6	52.4	51.0	1.000110
29000.0	326.5	-38.3	-49.0	31.0	484.3	597.0	51.3	49.9	1.000108
29500.0	319.5	-39.6	-50.1	31.0	476.4	595.4	49.7	46.6	1.000107
30000.0	312.5	-40.7	-53.7	22.9**	468.3	593.9	47.9	43.3	1.000105
30500.0	305.5	-41.9	-61.0	10.3**	460.2	592.5	46.3	40.1	1.000103
31000.0	298.8	-43.0			452.3	591.0	47.5	37.1	1.000101
31500.0	292.0	-44.3			444.5	589.3	49.0	34.2	1.000099
32000.0	285.4	-45.6			436.9	587.7	50.7	32.9	1.000097
32500.0	278.9	-46.8			429.4	586.1	52.5	32.3	1.000096
33000.0	272.6	-48.1			422.0	584.4			1.000094
33500.0	266.4	-49.4			414.8	582.8			1.000092
34000.0	260.4	-50.6			407.7	581.1			1.000091
34500.0	254.4	-51.7			400.2	579.7			1.000089

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4051.37 FEET MSL
23 APR. 81
ASCENSION NO. 38 1630 HRS MST

MANDATORY LEVELS
1130180038
LC-37

GEODETIC COORDINATES
32.40175 LAT DEG
106.31232 LON DEG

TABLE 17

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.		WIND DATA	
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE	PERCENT	DIRECTION DEGREES(TN)	SPEED KNOTS	
850.0	4973.	14.5	3.9	49.	152.8	10.6	
800.0	6642.	10.3	2.2	57.	118.0	13.9	
750.0	8392.	5.8	-0	66.	87.2	7.3	
700.0	10230.	.1	-2.1	85.	355.9	11.9	
650.0	12171.	-2.8	-6.4	76.	28.2	21.8	
600.0	14236.	-6.7	-16.7	45.	63.6	27.3	
550.0	16453.	-10.7	-26.4	26.	67.4	36.4	
500.0	18836.	-14.8	-29.6	27.	63.4	43.1	
450.0	21427.	-19.9	-32.1	32.	59.3	41.6	
400.0	24259.	-26.4	-38.1	32.	58.5	41.1	
350.0	27375.	-34.3	-45.4	31.	54.5	52.6	
300.0	30848.	-42.8			47.3	37.8	
250.0	34796.	-52.5					

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 5989.00 FEET
 23 APR. 61 1730 HRS
 ASCENSION NO. 234

SYNOPSIS LEVEL DATA
 115020294
 PHYS. CARDS

GEODETIC COORDINATES
 32.40003 LAT DEG
 105.37033 LON DEG

TABLE 18

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE		REL. HUM. PERCENT
		AIR DEGREES	DEWPOINT CENTIGRADE	
340.5	3989.0	17.7	5.6	45.0
350.0	4074.4	15.0	3.8	47.0
367.4	7776.4	6.6	.7	66.0
370.8	9492.9	2.5	-.9	78.0
390.0	10334.0	1.8	-2.0	76.0
393.2	10314.7	1.2	-4.4	66.0
397.6	13324.5	-5.4	-6.8	77.0
400.6	14232.6	-7.3	-11.3	73.0
392.2	14693.6	-6.9	-10.5	46.0
332.6	17287.5	-12.4	-25.0	34.0
500.0	18867.3	-14.8	-27.1	34.0
400.0	24306.3	-25.7	-30.9	34.0
345.0	27768.7	-35.0	-45.2	34.0

STATION ALTITUDE 3989.00 FEET MSL
 23 APR. 81
 ASCENSION NO. 294

UPPER AIR DATA
 1130020294
 WHITE SANDS
 TABLE 19

GEODETIC COORDINATES
 32.40043 LAT DEG
 106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
							DIRECTION DEGREES (TN)	SPEED KNOTS	
3989.0	880.5	17.7	5.6	45.0	1050.5	665.7	140.0	13.0	1.000275
4000.0	880.2	17.7	5.6	45.0	1050.2	665.7	140.0	13.0	1.000275
4500.0	864.5	16.3	4.7	46.0	1036.6	664.0	138.1	13.4	1.000270
5000.0	849.2	14.9	3.8	47.2	1023.3	662.4	136.3	13.8	1.000265
5500.0	833.9	13.4	3.4	50.6	1010.1	660.7	134.6	14.2	1.000261
6000.0	818.8	11.9	2.9	54.0	997.1	658.9	133.0	14.6	1.000257
6500.0	804.0	10.4	2.4	57.3	984.3	657.2	131.5	15.1	1.000253
7000.0	789.4	8.9	1.8	60.7	971.7	655.4	130.3	15.4	1.000250
7500.0	775.2	7.4	1.1	64.1	959.4	653.0	131.7	14.6	1.000246
8000.0	761.0	6.1	.5	67.6	946.5	652.0	131.7	13.9	1.000242
8500.0	747.0	4.9	.1	71.1	933.0	650.6	125.3	11.3	1.000238
9000.0	733.2	3.7	-.4	74.6	919.8	649.2	115.0	8.8	1.000234
9500.0	719.6	2.5	-.9	78.0	906.7	647.8	85.0	7.8	1.000230
10000.0	706.2	2.0	-1.6	76.6	891.4	647.2	52.3	10.6	1.000226
10500.0	693.0	1.6	-2.9	72.1	876.4	646.6	36.7	14.6	1.000220
11000.0	680.0	1.0	-4.6	66.4	862.1	645.8	28.8	17.7	1.000214
11500.0	667.1	-.4	-5.5	68.7	850.2	644.1	23.9	20.6	1.000210
12000.0	654.5	-1.8	-6.4	71.0	838.5	642.4	23.4	22.0	1.000206
12500.0	642.1	-3.2	-7.3	73.3	826.9	640.8	25.1	23.3	1.000203
13000.0	630.0	-4.6	-8.2	75.6	815.5	639.1	32.9	24.6	1.000199
13500.0	617.9	-5.8	-9.3	76.1	803.8	637.6	41.0	25.8	1.000195
14000.0	606.1	-6.8	-10.7	74.0	791.4	636.3	49.9	27.0	1.000191
14500.0	594.4	-7.0	-14.9	53.0	777.0	635.9	58.0	28.8	1.000183
15000.0	582.8	-7.7	-17.8	44.2	764.2	635.0	64.4	30.9	1.000178
15500.0	571.4	-8.8	-19.3	42.0	752.3	633.7	69.9	33.2	1.000175
16000.0	560.3	-9.8	-20.9	39.7	740.5	632.5	73.4	35.7	1.000171
16500.0	549.4	-10.8	-22.4	37.5	729.0	631.2	71.6	37.7	1.000168
17000.0	538.7	-11.8	-24.0	35.3	717.6	630.0	70.0	39.8	1.000165
17500.0	528.1	-12.7	-25.3	34.0	706.0	628.9	68.1	41.4	1.000162
18000.0	517.6	-13.5	-25.9	34.0	694.1	627.9	65.8	42.4	1.000159
18500.0	507.4	-14.2	-26.6	34.0	682.4	627.0	63.6	43.5	1.000156
19000.0	497.3	-15.1	-27.3	34.0	670.9	626.0	62.7	44.3	1.000153
19500.0	487.2	-16.1	-28.2	34.0	659.9	624.8	63.6	44.6	1.000150
20000.0	477.3	-17.1	-29.1	34.0	649.0	623.6	64.5	45.0	1.000148
20500.0	467.6	-18.1	-30.0	34.0	638.4	622.3	64.1	45.1	1.000145
21000.0	458.1	-19.1	-30.9	34.0	627.9	621.1	62.4	44.7	1.000143
21500.0	448.8	-20.1	-31.8	34.0	617.6	619.9	60.6	44.4	1.000140
22000.0	439.7	-21.1	-32.7	34.0	607.5	618.6	58.8	44.3	1.000138
22500.0	430.8	-22.1	-33.6	34.0	597.5	617.4	57.2	44.4	1.000135
23000.0	422.0	-23.1	-34.5	34.0	587.7	616.1	55.5	44.6	1.000133

UPPER AIR DATA
 120000Z294
 WHITE SANDS
 TABLE 19 CONT

STATION ALTITUDE 5989.00 FEET MSL
 23 APR. 61
 ASCENSION NO. 294

GEODETIC COORDINATES
 32.40043 LAT DEG
 106.37033 LONG DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	REL. HUM. PERCENT	DENSITY GM/CM ³ METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES (TN)	SPEED KNOTS	
23500.0	413.5	-24.1	34.0	578.1	614.9	55.3	45.4	1.000131
24000.0	405.1	-25.1	34.0	568.7	613.7	56.2	46.8	1.000128
24500.0	396.7	-26.2	34.0	559.5	612.3	57.1	48.2	1.000126
25000.0	388.3	-27.6	34.0	550.7	610.6			1.000124
25500.0	380.1	-28.9	34.0	542.1	608.9			1.000122
26000.0	372.1	-30.2	34.0	533.5	607.2			1.000120
26500.0	364.2	-31.6	34.0	525.2	605.5			1.000118
27000.0	356.5	-32.9	34.0	517.0	603.8			1.000116
27500.0	349.0	-34.3	34.0	508.9	602.1			1.000114

STATION ALTITUDE 3989.00 FEET MSL
23 APR. 81 1730 HRS MST
ASCENSION NO. 294

MANDATORY LEVELS
1130020294
WHITE SANDS

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

TABLE 20

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM. PERCENT	WIND DATA	
MILLIBARS	FEET	AIR DEGREES	DEWPOINT CENTIGRADE		DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	4971.	15.0	3.8	47.	136.4	13.8
800.0	6641.	10.0	2.2	58.	131.1	15.2
750.0	8387.	5.1	.2	70.	127.0	11.8
700.0	10224.	1.8	-2.0	76.	43.4	12.6
650.0	12175.	-2.3	-6.7	72.	23.3	22.5
600.0	14241.	-7.3	-11.6	71.	54.1	27.8
550.0	16456.	-10.7	-22.3	38.	71.7	37.6
500.0	18841.	-14.8	-27.1	34.	62.4	44.2
450.0	21432.	-19.9	-31.7	34.	60.8	44.4
400.0	24266.	-25.7	-36.9	34.	56.8	47.7
350.0	27388.	-34.1	-44.4	34.		